

SPECIFICATION

DILL BRIDGE

DESIGN: Load and Resistance Factor Design per AASHTO Bridge Design Specifications 1994 and Interim Specifications 1996.

DESIGN LOADING

LIVE LOAD: Modified Strength I
Seismic Performance Category A

MEETING PLACE BRIDGE

DESIGN: Load Factor Design per AASHTO Standard Specifications for Highway Bridges 1996.

DESIGN LOADING

LIVE LOAD: HS25
STRESS CYCLES: 500,000

CONTRACT: State of Maine, Department of Transportation,
Standard Specifications Highways and Bridges,
Revisions of April 1995.

MATERIALS

CONCRETE: Precast Class P
Leveling Slab and Block-outs Class AA
Pipe Pile Concrete Fill Class S
All other Cast-in-place Concrete Class A
REINFORCING STEEL: ASTM A615 Grade 60
STRUCTURAL STEEL: All Materials ASTM A709, Grade 50W
High Strength Bolts ASTM A325, Type 3
PRETENSIONING STRANDS ASTM A417, Grade 270, Low Relaxation.

BASIC ALLOWABLE STRESSES

CONCRETE: Precast $f'_c = 6,000$ psi.
 $f_{ci} = 4,500$ psi.
Class AA $f'_c = 4,000$ psi.
Class S $f'_c = 3,000$ psi.
All Other $f'_c = 4,000$ psi.
REINFORCING STEEL: $f_y = 60,000$ psi.
STRUCTURAL STEEL: ASTM A709, Grade 50 $F_y = 50,000$ psi.
ASTM A325 $F_v = 25,000$ psi.

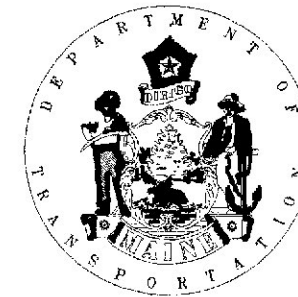
HYDROLOGIC DATA	DILL BRIDGE	MEETING PLACE BRIDGE	
Drainage Area	= 20.56	36.50	sq. miles
DESIGN DISCHARGE (Q50)	= 2294	5800	cfs
CHECK DISCHARGE (Q100)	= 2655	6970	cfs
HEADWATER ELEV. (Q50)	= 755.0	755.3	
HEADWATER ELEV. (Q100)	= 756.0	756.2	
DISCHARGE VELOCITY (Q50)	= 5.8	5.1	fps
DISCHARGE VELOCITY (Q100)	= 6.4	6.4	fps

A hydrologic report of the bridge site is available for the Contractor's reference at the Bridge Design Office in Augusta. The hydrologic report is based on the interpretation by the Department of information obtained for the subject site and no assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

Plans of existing bridge are available for the Contractor's reference at the Bridge Design Office in Augusta. These plans are reproductions of original drawings as prepared for the construction of the bridge and it is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span. A bridge deck evaluation is also available.

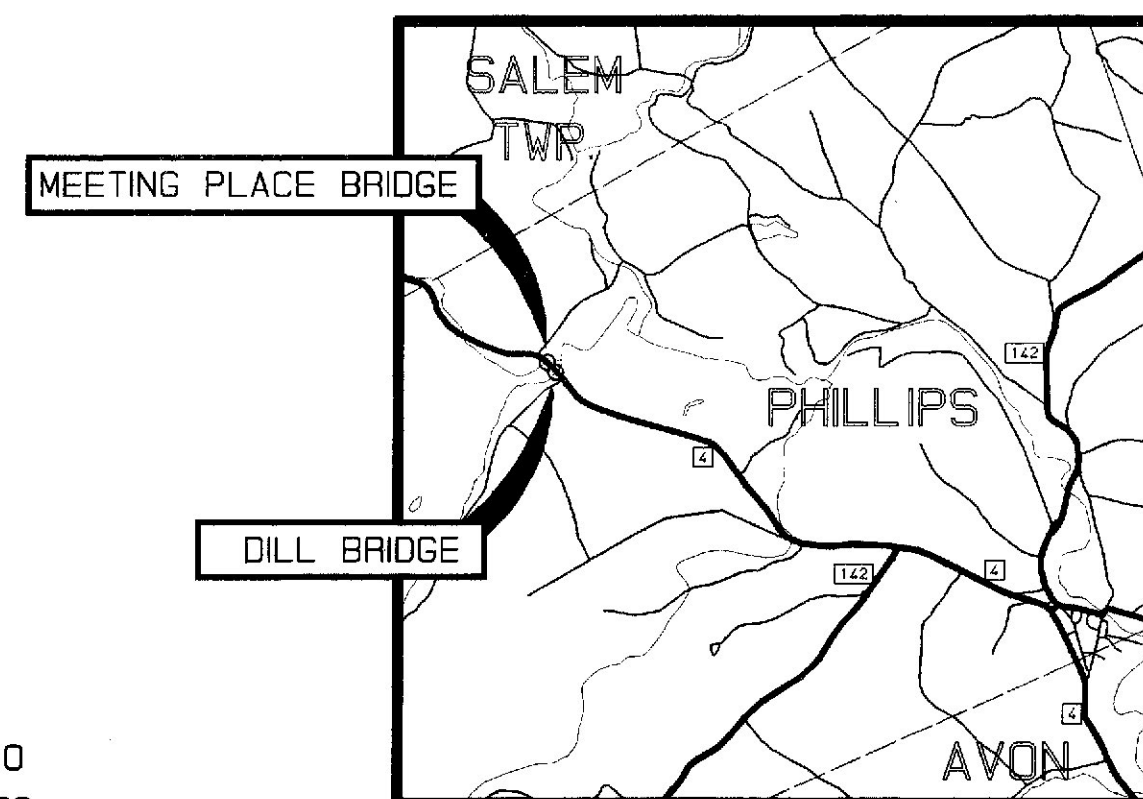
NOTE:
All work contemplated under this contract to be governed by and in conformity with the Standard Specifications (Revision of April 1995) and supplementals thereto, as modified on the plans and in the Special Provisions.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



PLANS

DILL BRIDGE
OVER
SOUTH BRANCH SANDY RIVER
AND
MEETING PLACE BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
PROJECT NO. BR-032-2(13)X
PROJECT LENGTH 0.161 MILES



TRAFFIC DATA

AADT 1995 = 1280
AADT 2015 = 2050
DHV = 246
T (%) = 9
D (%) = 6
V = 50 mph
18 kips P20 = 159

Scale
1" = 500' 1 MILE
1000' 0" 2000' FEET
1" = 0.5 KILOMETER

Location Map

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER
CHIEF ENGINEER

7/23/97
DATE
7/23/97
DATE

As BUILT Variant B, 1998

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DILL BRIDGE #2228

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MEETING PLACE BRIDGE #2545

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UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

REGION 1

APPROVED:

DIVISION ADMINISTRATOR DATE

GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
2. For easements, construction limits, and right-of-way lines refer to Right of Way Map.
3. All embankment material, except as otherwise shown, placed in water shall be granular borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
4. The nominal clearing limits shall be 5' beyond and parallel to the construction slope lines as shown. However, the actual limits shall be established in the field to minimize removal of existing vegetation.
5. Place loam, 2" deep, on slopes between Station 201+00 and Station 218+00.
6. Do not excavate for Aggregate Subbase Coarse where existing material is suitable as determined by the Engineer. Payment for shaping and compacting of the existing subbase and layers of new subbase 6" or less thick, in areas where the Engineer directs the Contractor not to excavate to the subgrade line shown on the plans, will be made in accordance with Subsection 104.03, Extra Work.
7. One guardrail delineator post and one terminal end shall be installed at each guardrail end.
8. Breakaway cable terminals shall be installed concurrent with the placement of each section of beam guardrail, unless other approved temporary protection has been authorized.
9. ~~Seeded~~ ^{Riprap} gutters shall be constructed, after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. *was used*
10. If foundation material is required under culverts, it shall meet the requirements for Granular Borrow - Underwater Backfill and will be paid for as Granular Borrow.
11. All slopes shall be seeded with method No. 2 unless otherwise noted. All lawns and developed area shall be seeded with Seeding Method No. 1 unless otherwise noted.
12. Mulch shall be applied in areas seeded by Seeding Method No. 2 and Method No. 1.
13. Temporary erosion control measures shall be maintained as directed by the Engineer. Payment will be made under Item 629.05, Hand Labor; 631.12, All Purpose Excavator; and 631.172, Truck Large.
14. ~~Construct an 8 foot bituminous curb, including end transition, behind Abutment No. 1 (left side at Ditt Bridge and Meeting Place Bridge). The curbing shall be placed adjacent to the permanent concrete barrier and located in front of the guardrail posts under the guardrail beam. No direct payment will be made for the bituminous curbing as it will be considered incidental to bituminous pavement pay items.~~
Build Riprap Damspoates 3' wide @ Edge of Paved Shoulder in place of Note 14.
15. All H-piles shall conform to the requirements of ASTM A709, Grade 50. ASTM A709, Grade 36 steel may be used providing mill certification, on a heat basis, is submitted demonstrating a minimum yield strength of 50 ksi.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

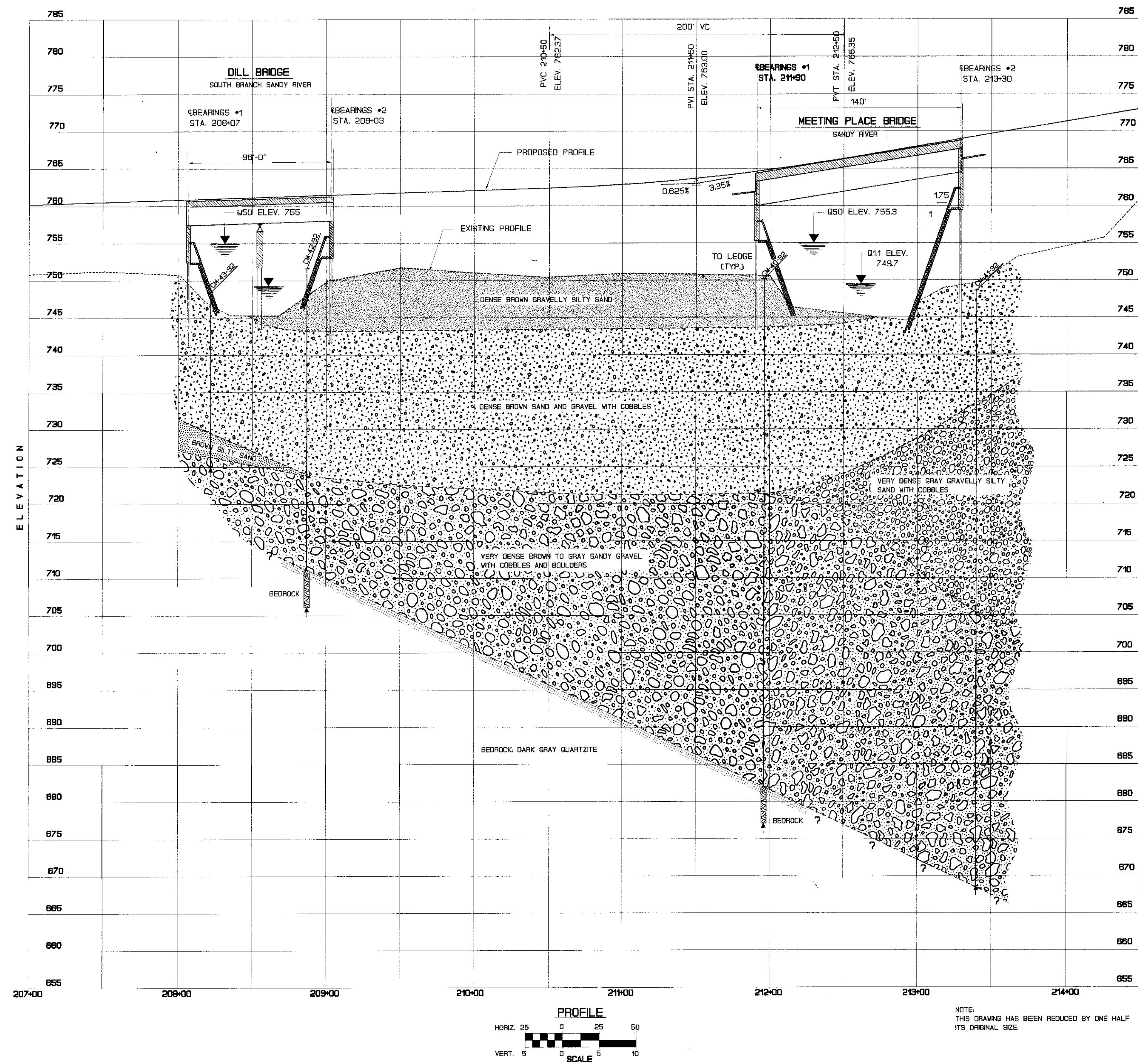
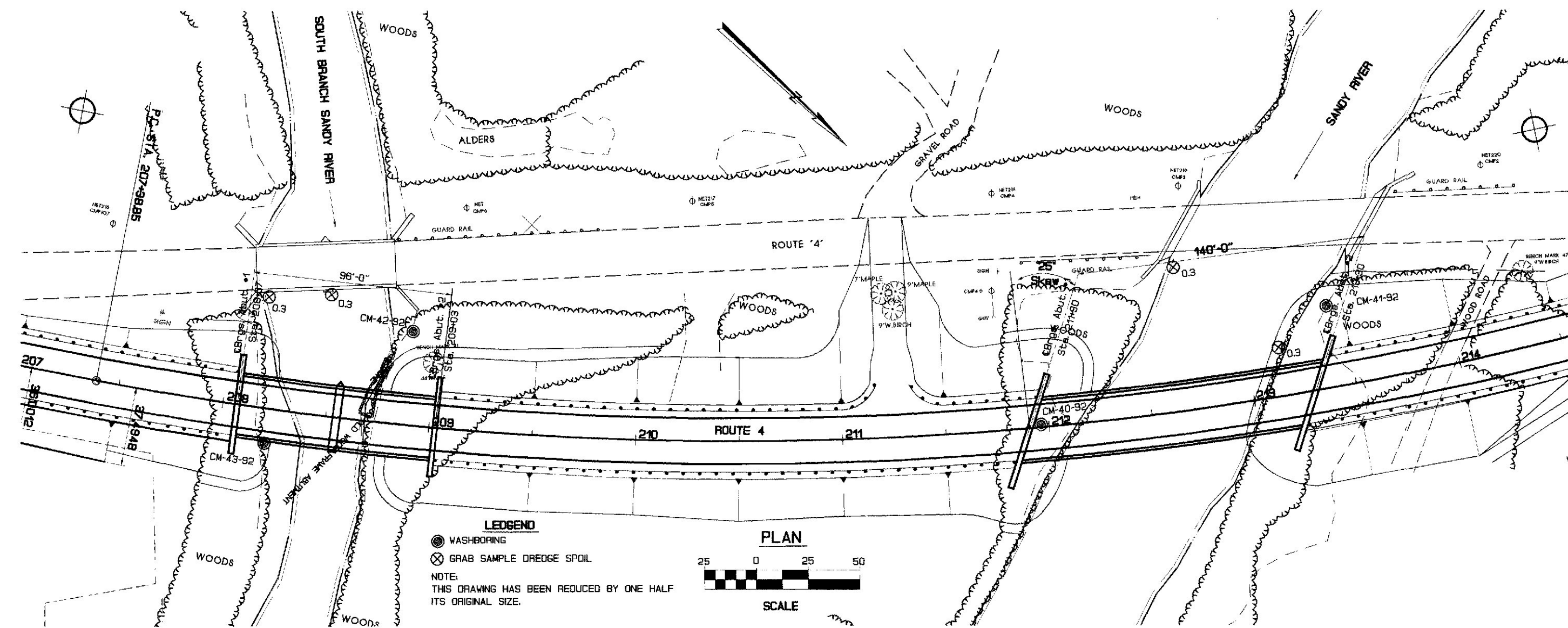
DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
ESTIMATED QUANTITIES

SHEET OF AUGUSTA, MAINE MAY 1997

* UNDETERMINED LOCATION

**** NON-BID ITEM**

16 APR 97 - 15.06.10



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

05/NOV/95-01/00/30

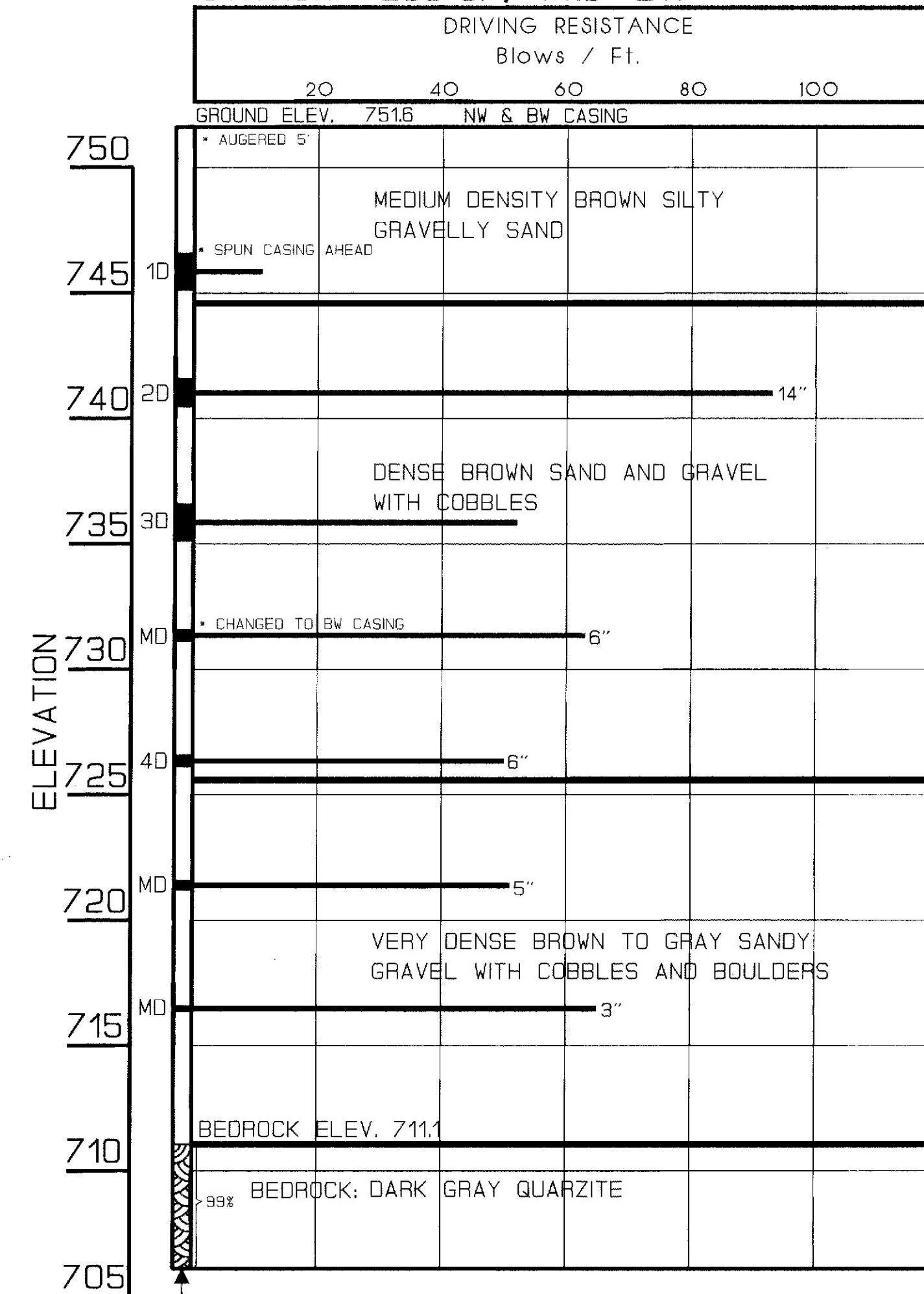
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE over S. BRANCH SANDY RIVER
and
MEETING PLACE BRIDGE over SANDY RIVER
in the town of
PHILLIPS
FRANKLIN COUNTY
FOUNDATION SURVEY

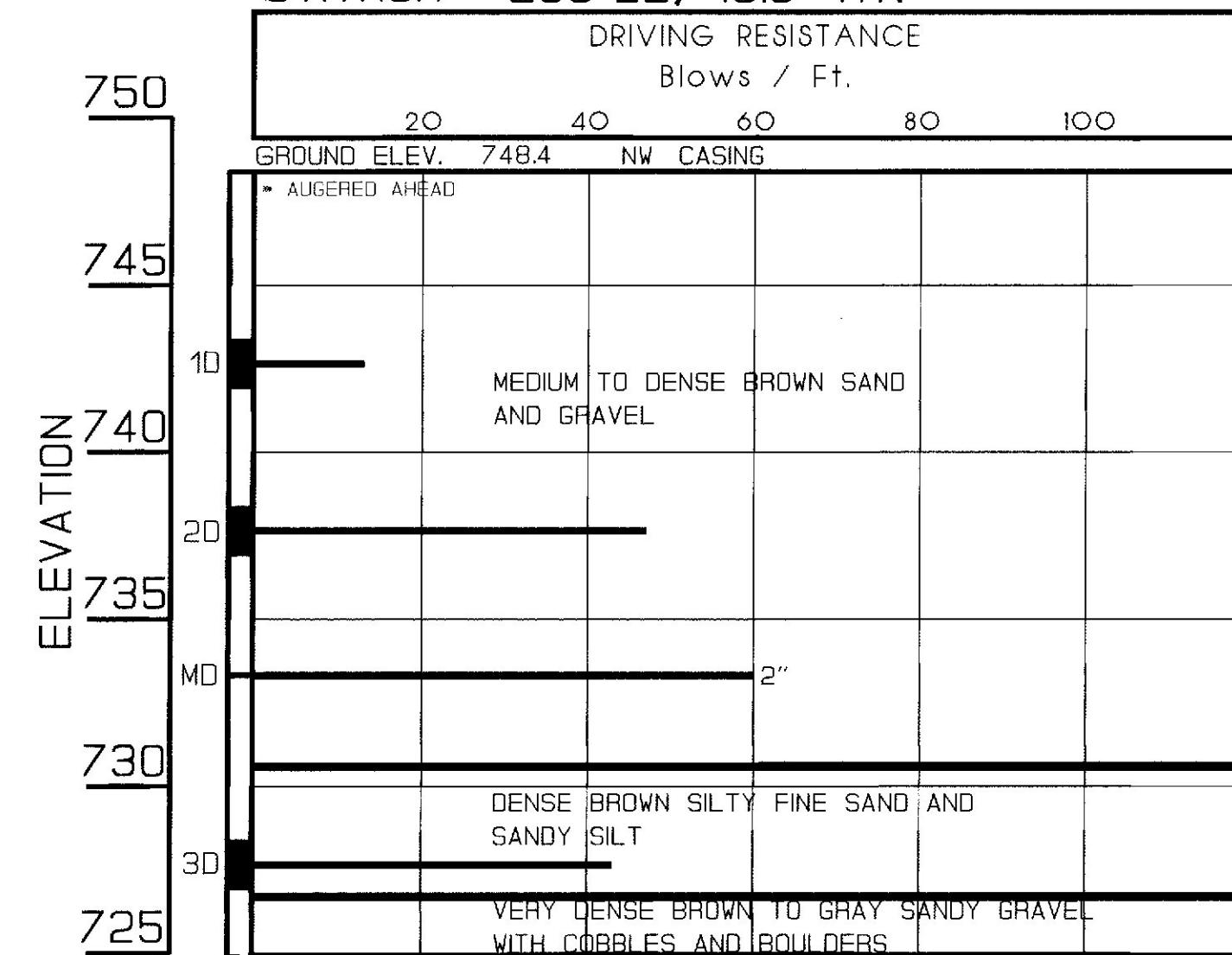
SHEET OF AUGUSTA, MAINE

AS BUILT 1998
V. T. Bannister, Jr.

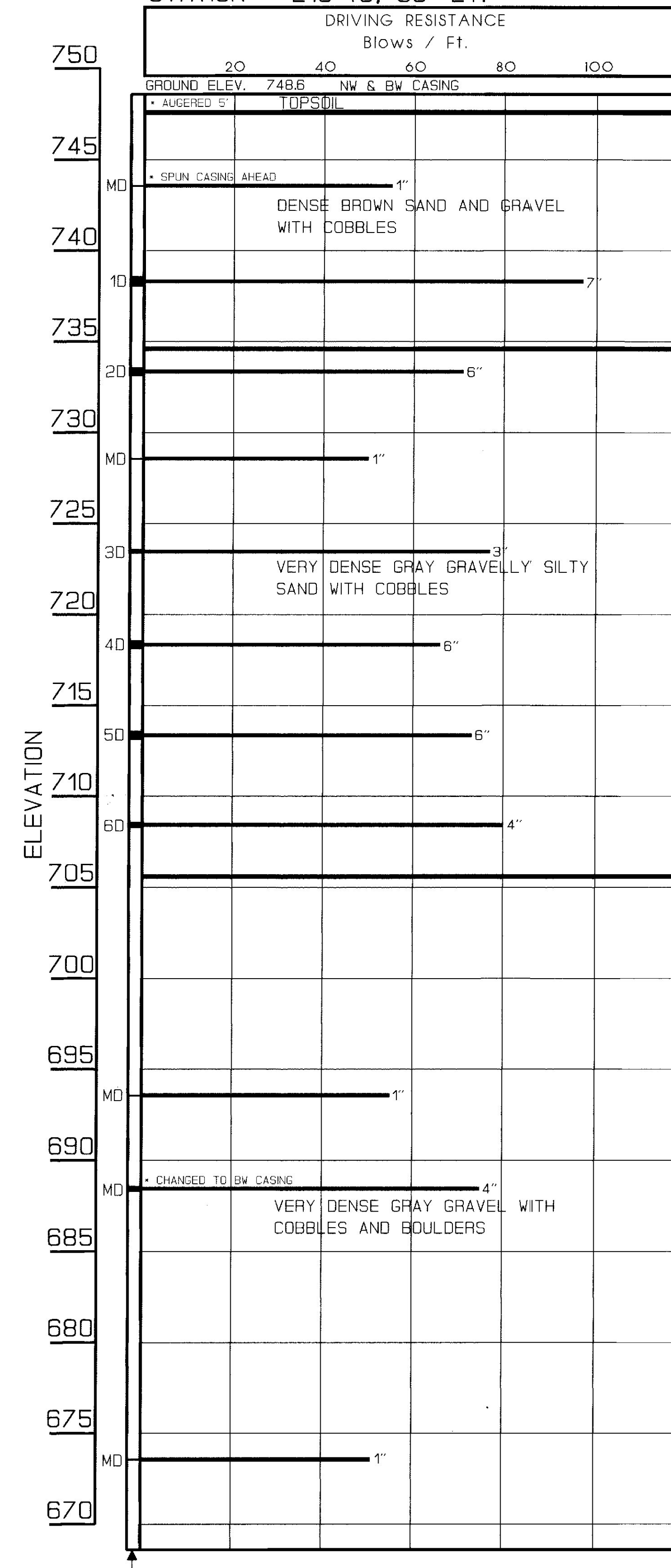
BORING STATION CM-42-92
208+87, 44.8' LT.



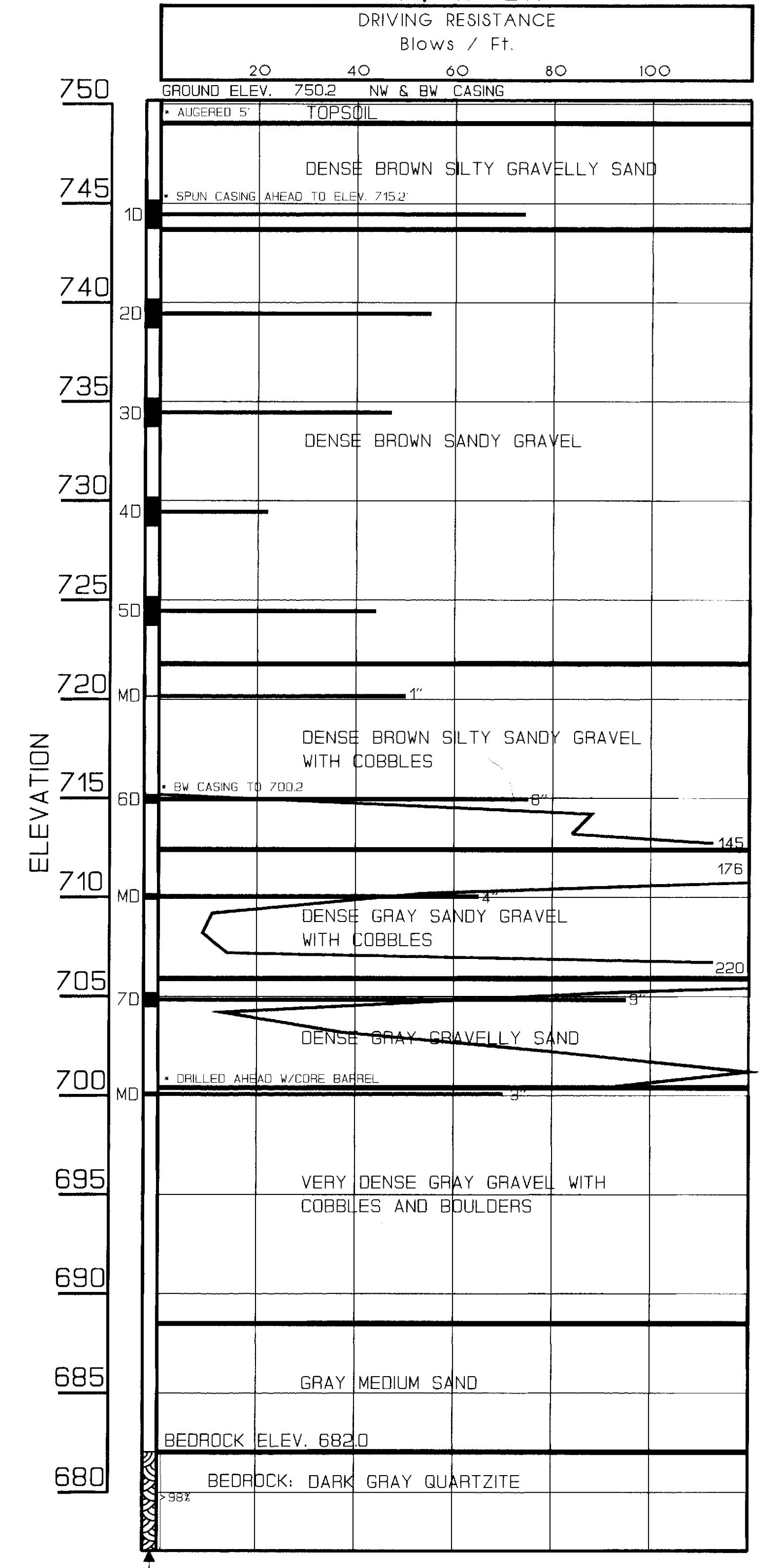
BORING STATION CM-43-92
208+22, 16.6' RT.



BORING STATION CM-41-92
213+40, 39' LT.



BORING STATION CM-40-92
211+96.3, 13' LT.



BORING NOTES

- All samples and vanes are made ahead of casing
- Water Elevation
- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow
- Location of sample or sample attempt
- Number and type of dry sample
- ID Split spoon sampler
- 1C 2" O.D. 16 ga. seamless tubing
- IU 3 1/2" O.D. 16 ga. seamless tubing
- IW Wash sample and number
- MD Unsuccessful sample attempt and type of sampler
- Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow
- H Sampling spoon or seamless tubing driven by static weight of drill rods and hammer
- P Piston sampler
- Field vane test
- Bottom of boring (may not be bottom of soil strata)
- Refusal of drill rods or casing (may not be ledge)
- Locations cored by diamond bit and percent recovery of rock

As BUILT 1998
Vincent Benoit Jr.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE over S. BRANCH SANDY RIVER
and
MEETING PLACE BRIDGE over SANDY RIVER
in the town of
PHILLIPS
FRANKLIN COUNTY
BORING DETAILS

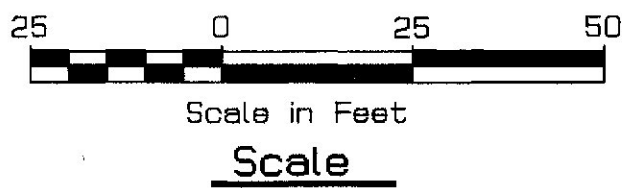
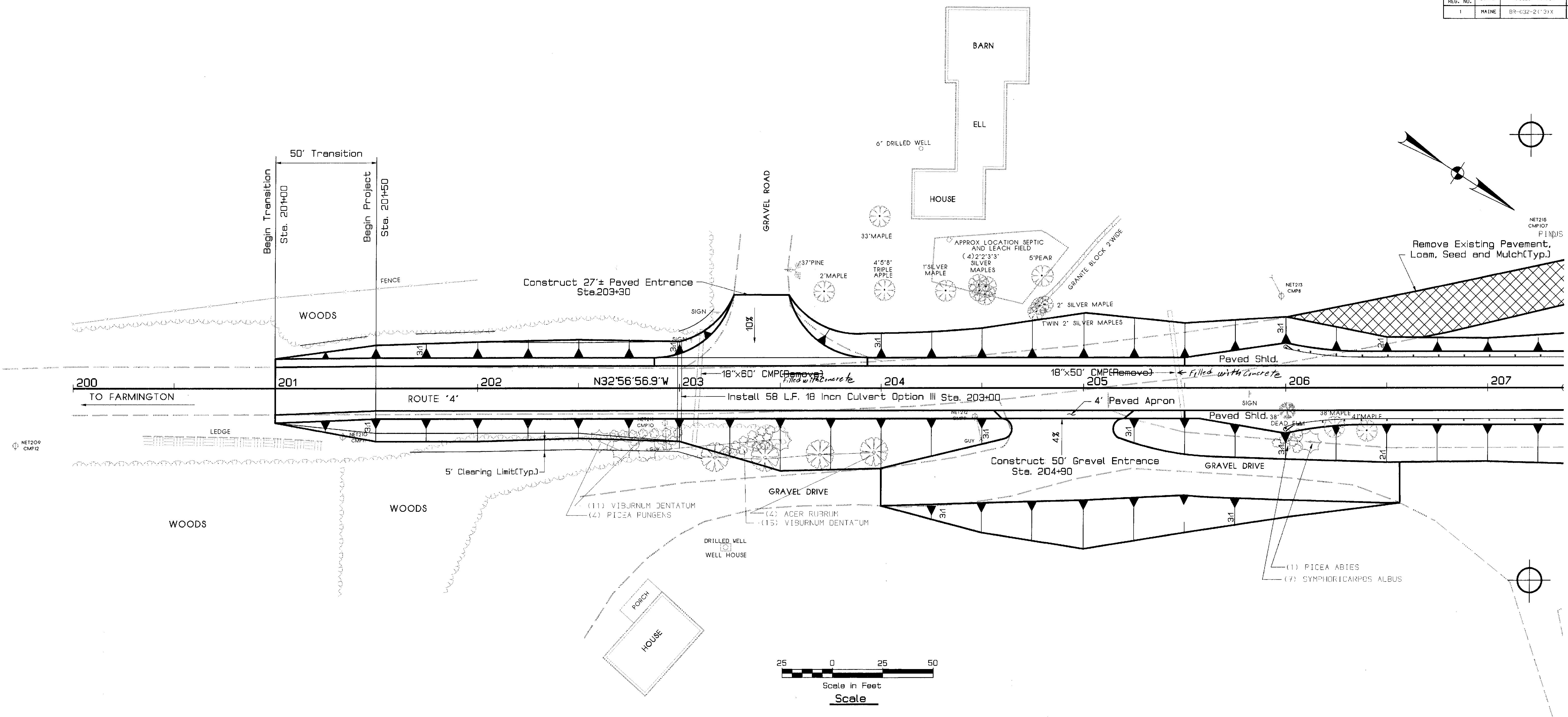
SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	DATE
DESIGN-DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	

PLANS

05NOV95-0100.30

F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(1)31X	5	45



MAINTENANCE OF TRAFFIC

Maintain Traffic on Existing Bridges
During Construction of New Bridges

Bridge No.'s - 2228 & 2545
Survey Book #32/229-231

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER

IN THE TOWN OF
PHILLIPS

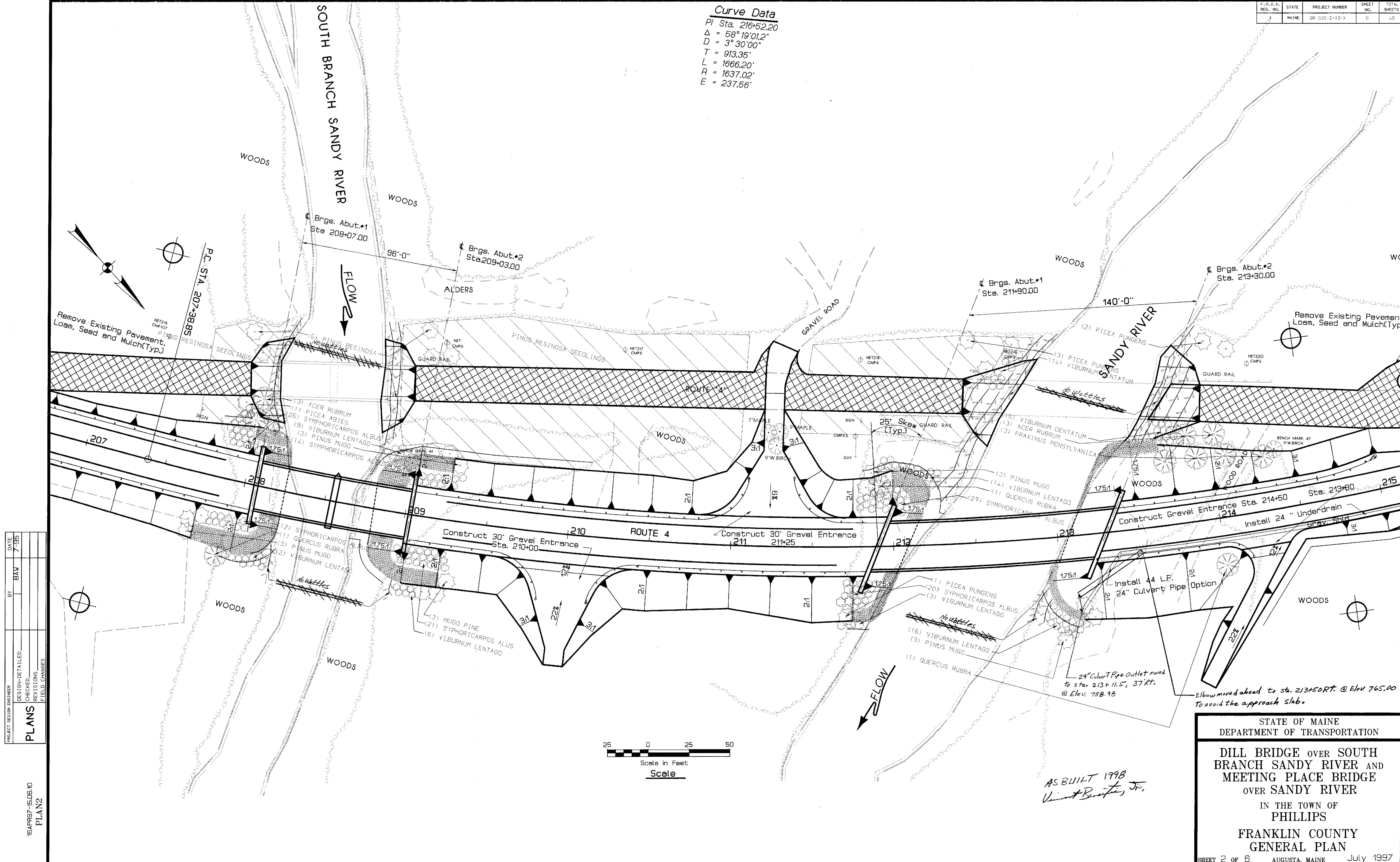
FRANKLIN COUNTY
GENERAL PLAN

AS BUILT 1998
Vincent Bonifazi, Jr.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	BAW	7-95
CHECKED		
REVISIONS		
FIELD CHANGES		

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	BR-032-2(13)X	6	46	

Curve Data
PI Sta. 216+52.20
 $\Delta = 58^{\circ}19'01.2''$
 $D = 3^{\circ}30'00''$
 $T = 913.35'$
 $L = 1666.20'$
 $R = 1637.02'$
 $E = 237.56'$



PROJECT DESIGN ENGINEER	DATE
BY BAW	7-95
DESIGN-DETAILED	
CHECKED	
REVISIONS	
FIELD CHANGES	
PLANS	

16APR97-15JUN00
PLAN2

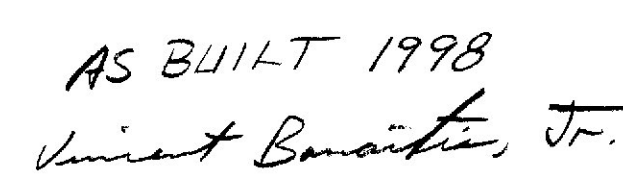
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER

IN THE TOWN OF
PHILLIPS

FRANKLIN COUNTY
GENERAL PLAN

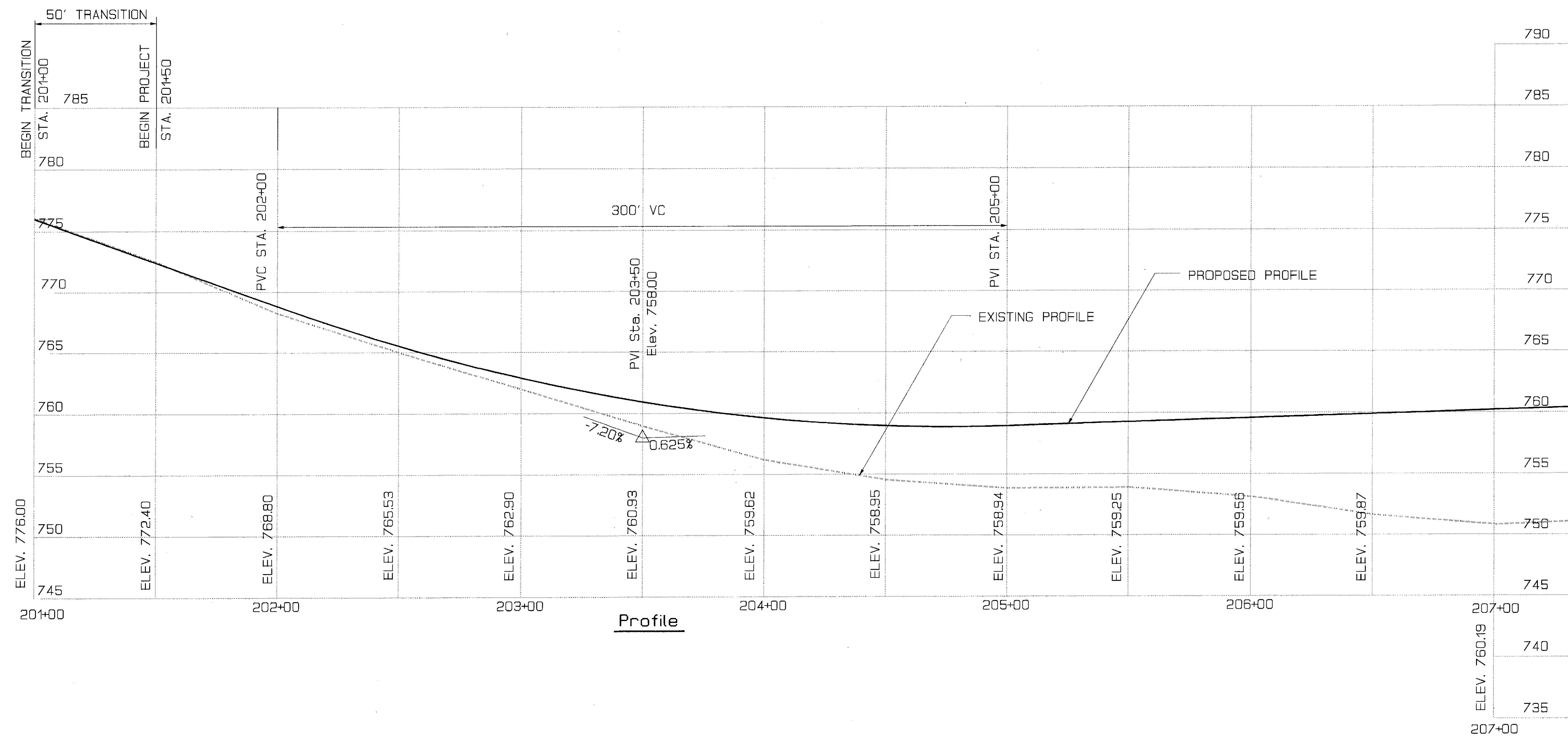
SHEET 2 OF 6 AUGUSTA, MAINE July 1997



SHEET 3 OF 6 AUGUSTA, MAINE July 1997

16APR97-15.06.10
PLAN3

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-21131X	6	46



Profile

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	BAW	7-95
CHECKED		
REVISIONS		
FIELD CHANGES		

16APR97-15:06:10
PROF1

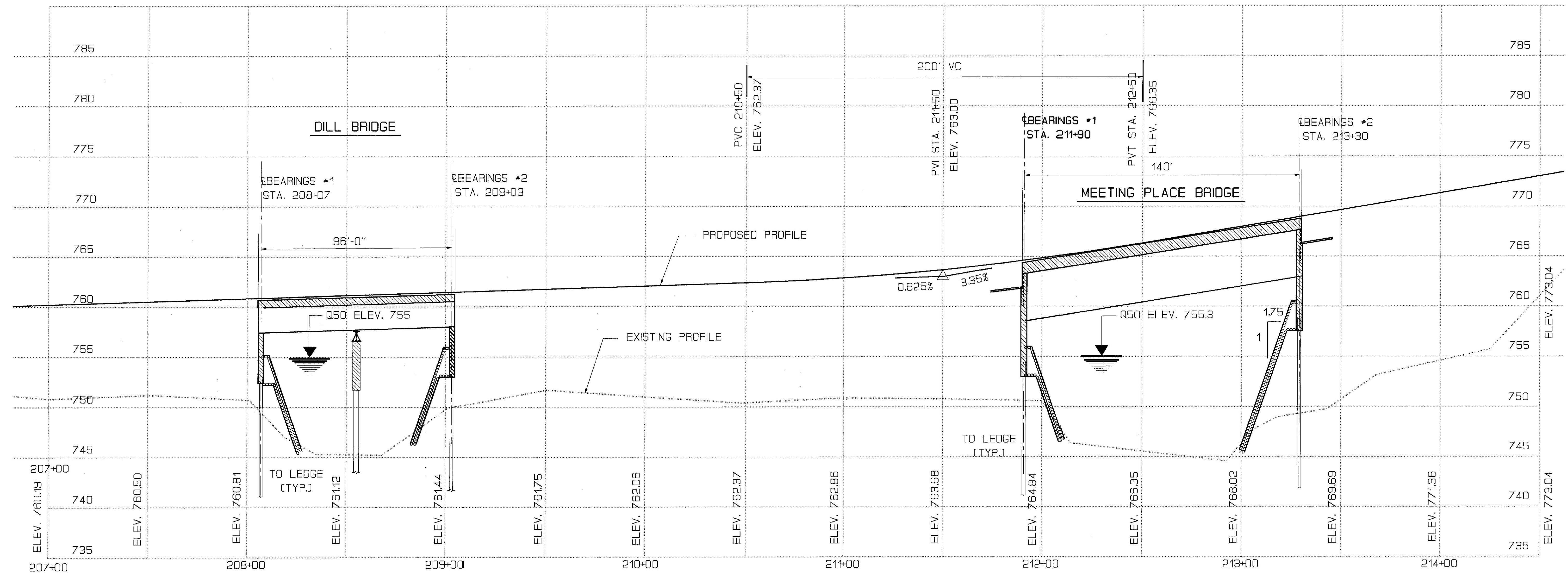
AS BUILT 1998
Vincent F. Benoit, Jr.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

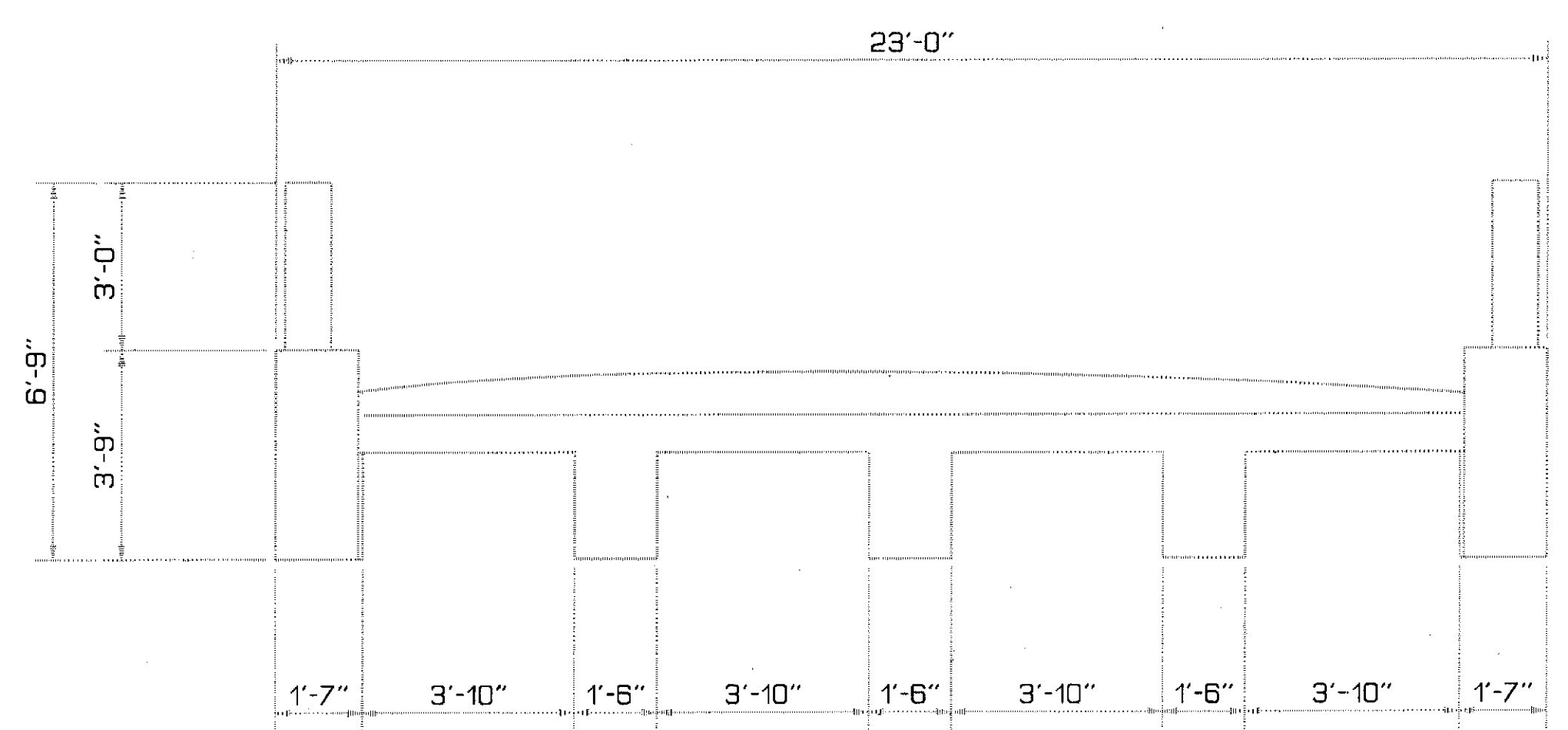
DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
PROFILE

SHEET 4 OF 6 AUGUSTA, MAINE July 1997

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-P11131X	9	46



Profile



Existing Bridge Section
Dill Bridge

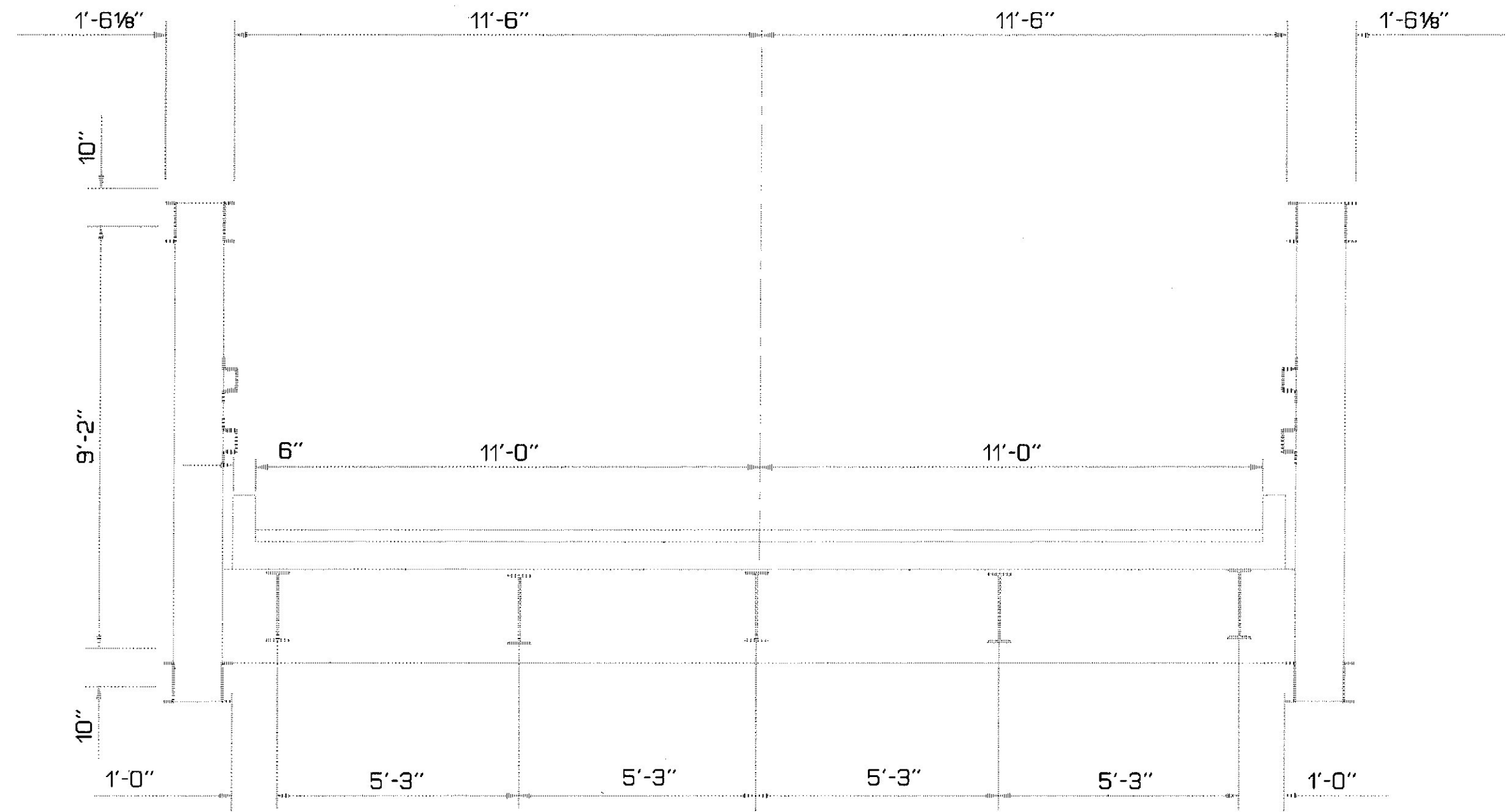
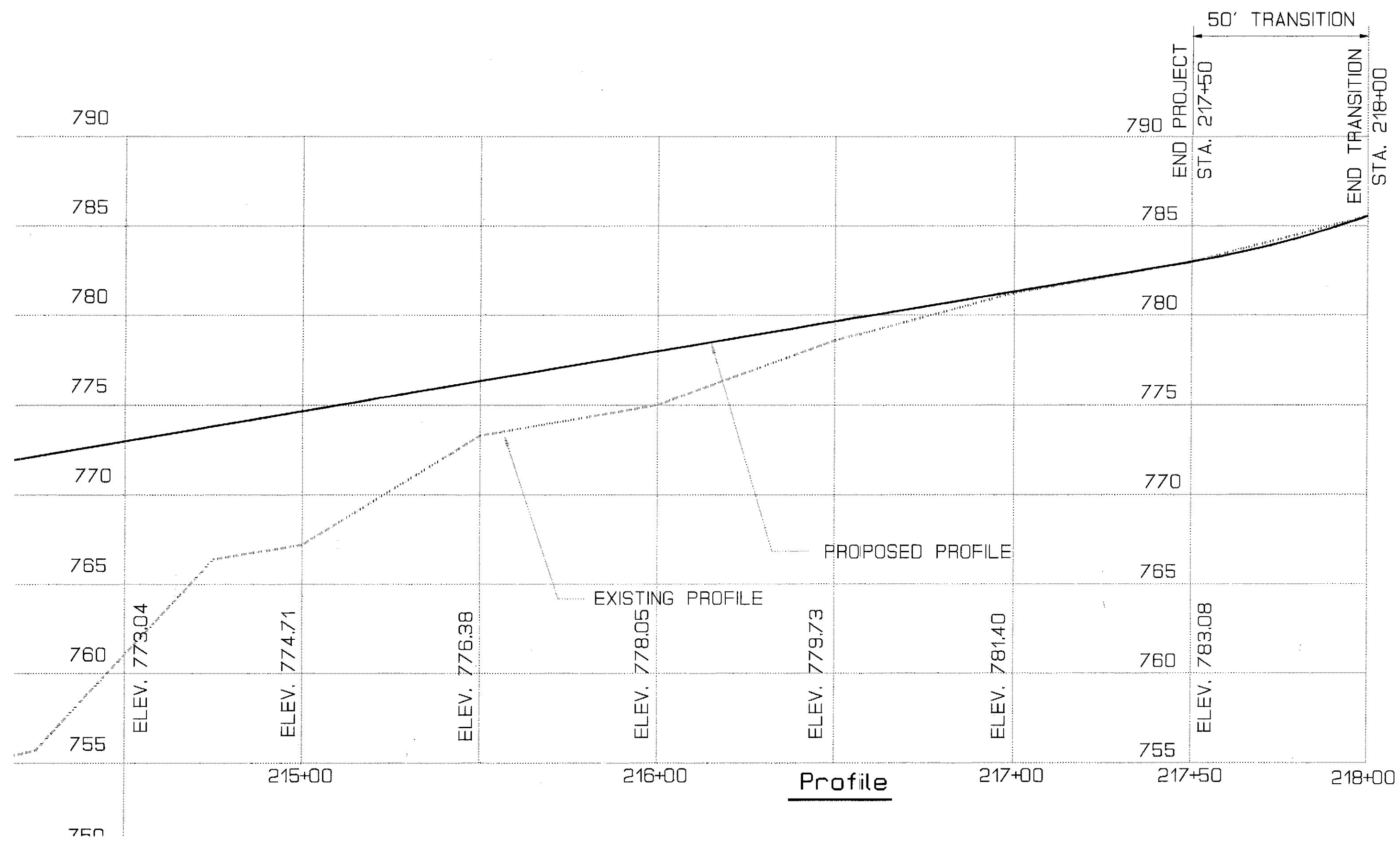
As BUILT 1998
Vincent Barabie, Jr.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER
IN THE TOWN OF
PHILLIPS
FRANKLIN COUNTY
PROFILE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	BAW	7-95
DESIGN-DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

16APR97-1508:10
PROP2

F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	10	46



Existing Bridge Section
Meeting Place Bridge

AS BUILT 1998
Vincent Bannister, Jr.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DILL BRIDGE OVER SOUTH
BRANCH SANDY RIVER AND
MEETING PLACE BRIDGE
OVER SANDY RIVER

IN THE TOWN OF
PHILLIPS

FRANKLIN COUNTY
PROFILE

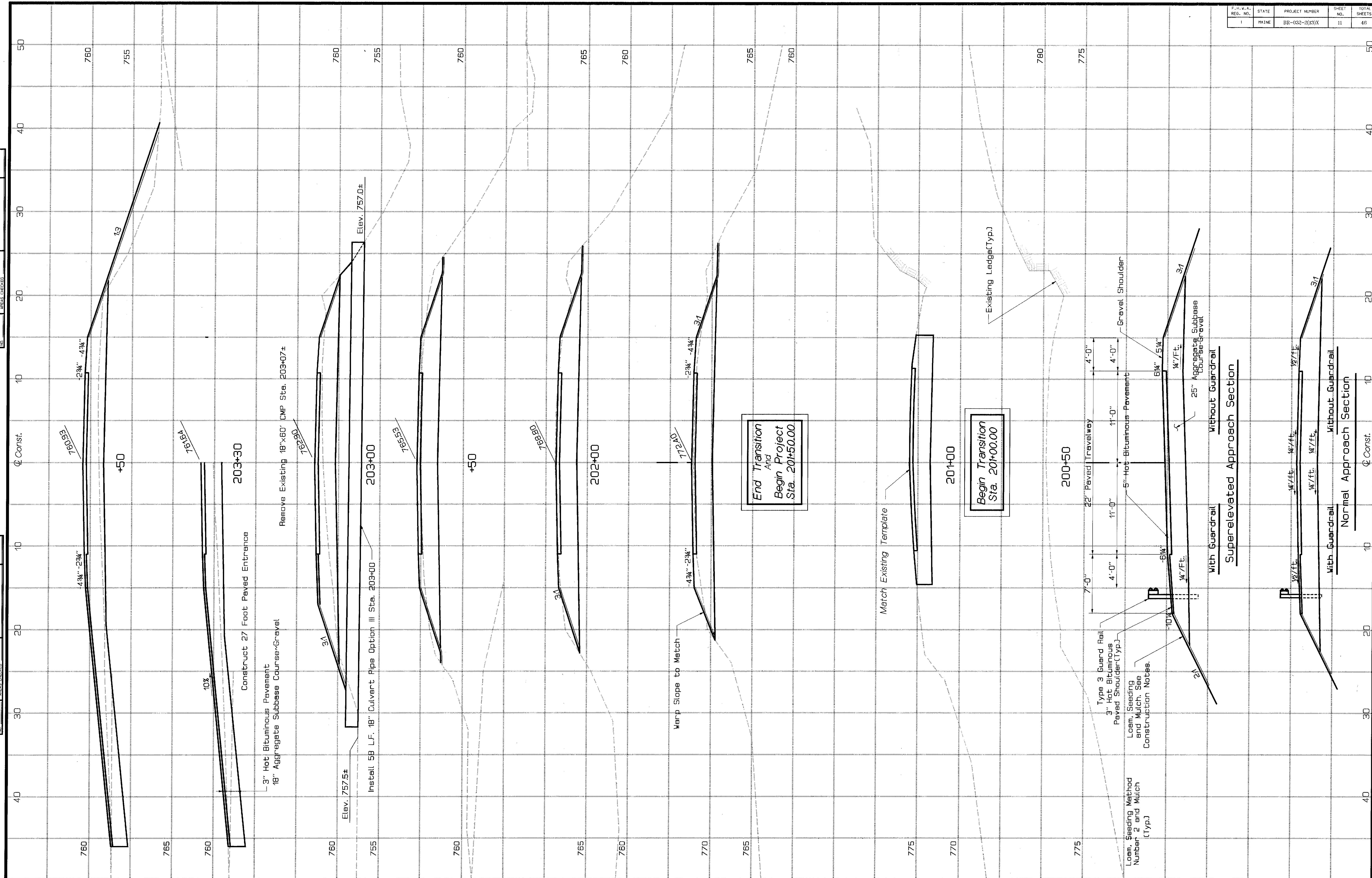
SHEET 6 OF 6 AUGUSTA, MAINE July 1997

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	BAW	7-95
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

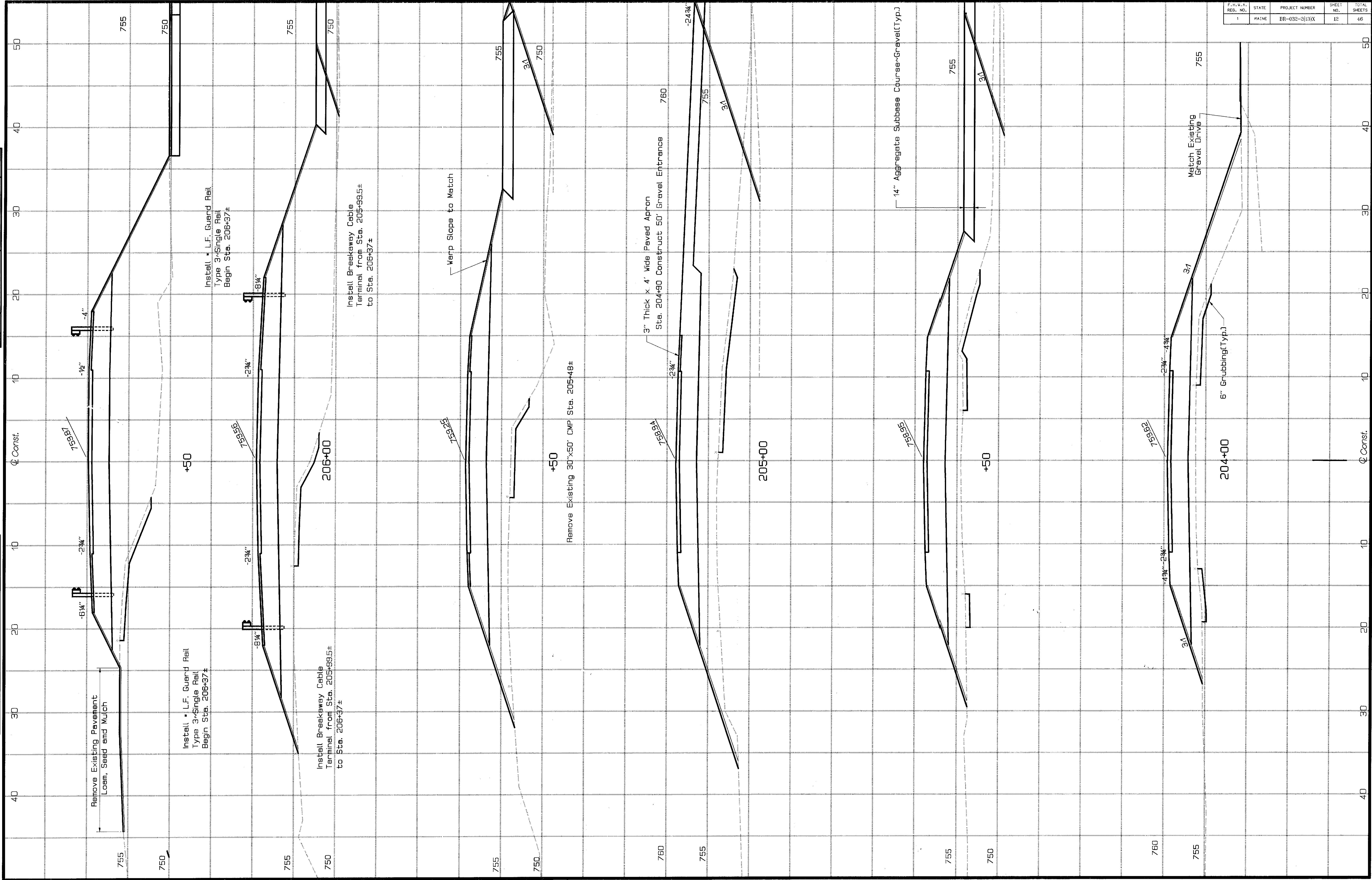
16APR97-15:06:10
PROP3

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	11	46



ORIGINAL	SURVED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

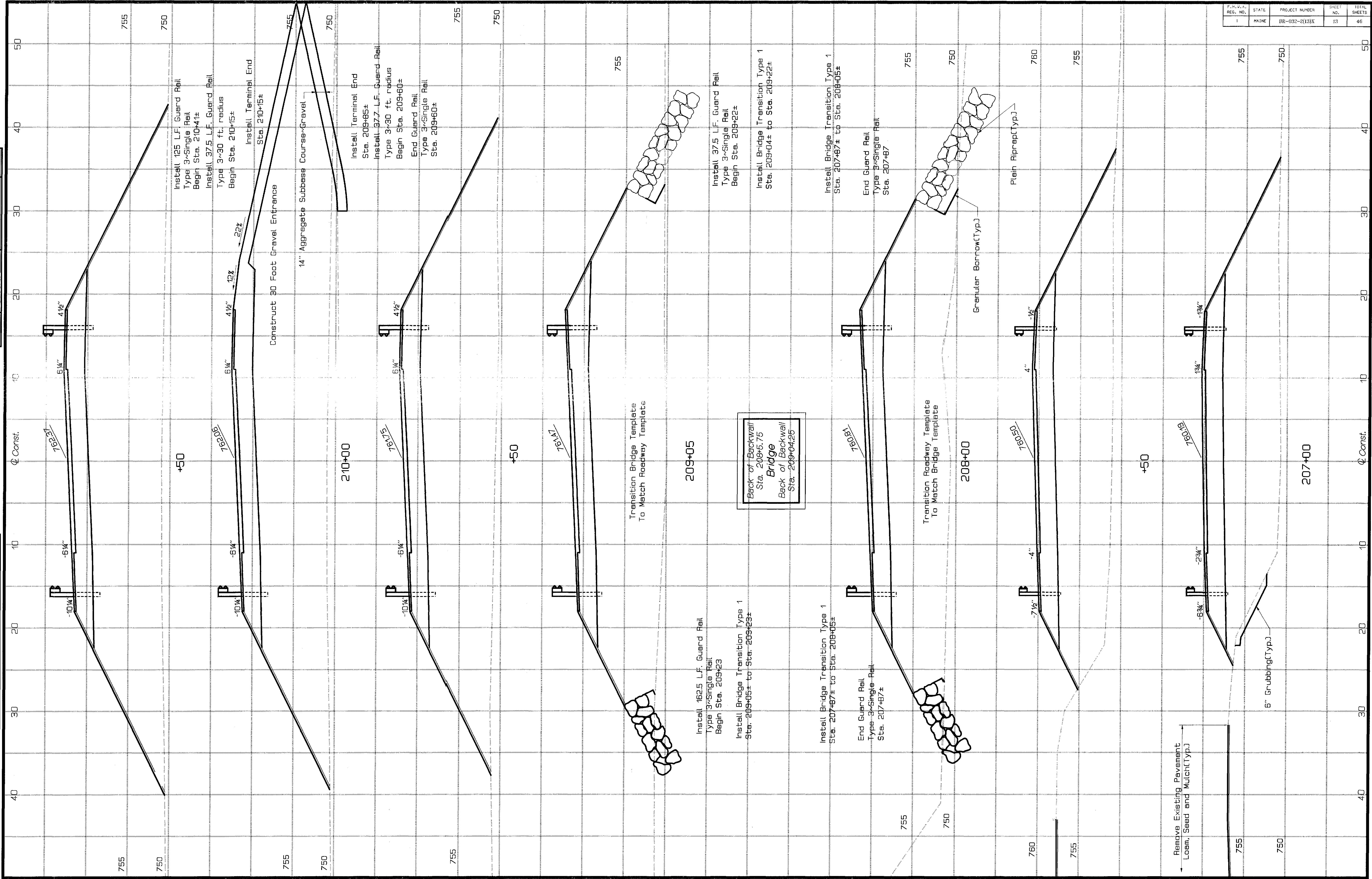
FINAL	SURVED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		



F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	12	46

ORIGINAL SURVEY		DATE
SURVEYED	DATE	
PLOTTED	DATE	
NOTED	DATE	
AREAS	DATE	
CHECKED	DATE	

FINAL SURVEY		DATE
SURVEYED	DATE	
PLOTTED	DATE	
NOTED	DATE	
AREAS	DATE	
CHECKED	DATE	

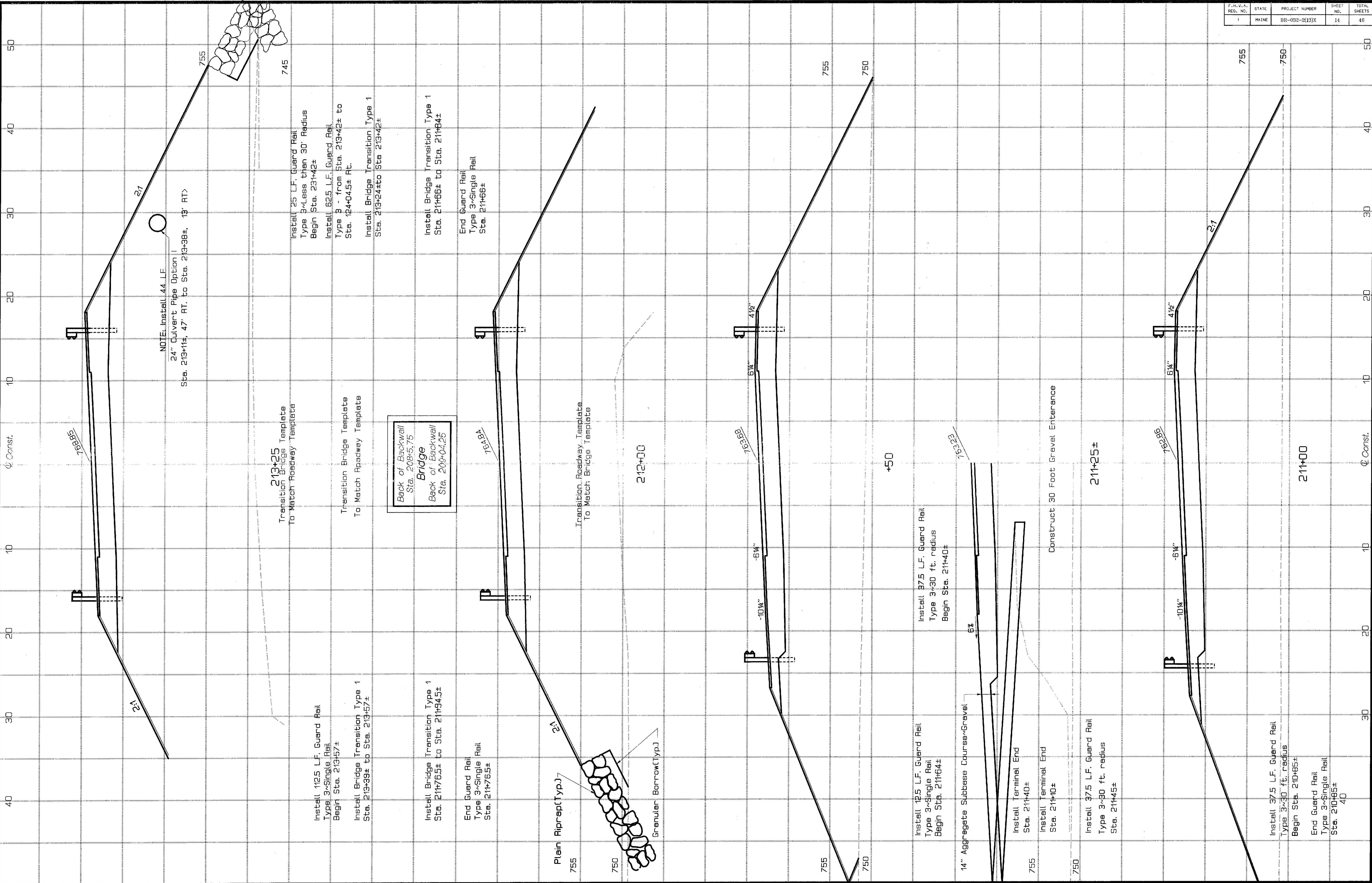


PROJECT NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	13	46

15APR97-150620

ORIGINAL SURVEY	BY	DATE
NOTED	15/2/97	
NOTED		
NOTED		
NOTED		

FINAL SURVEY	BY	DATE
NOTED		
NOTED		
NOTED		
NOTED		

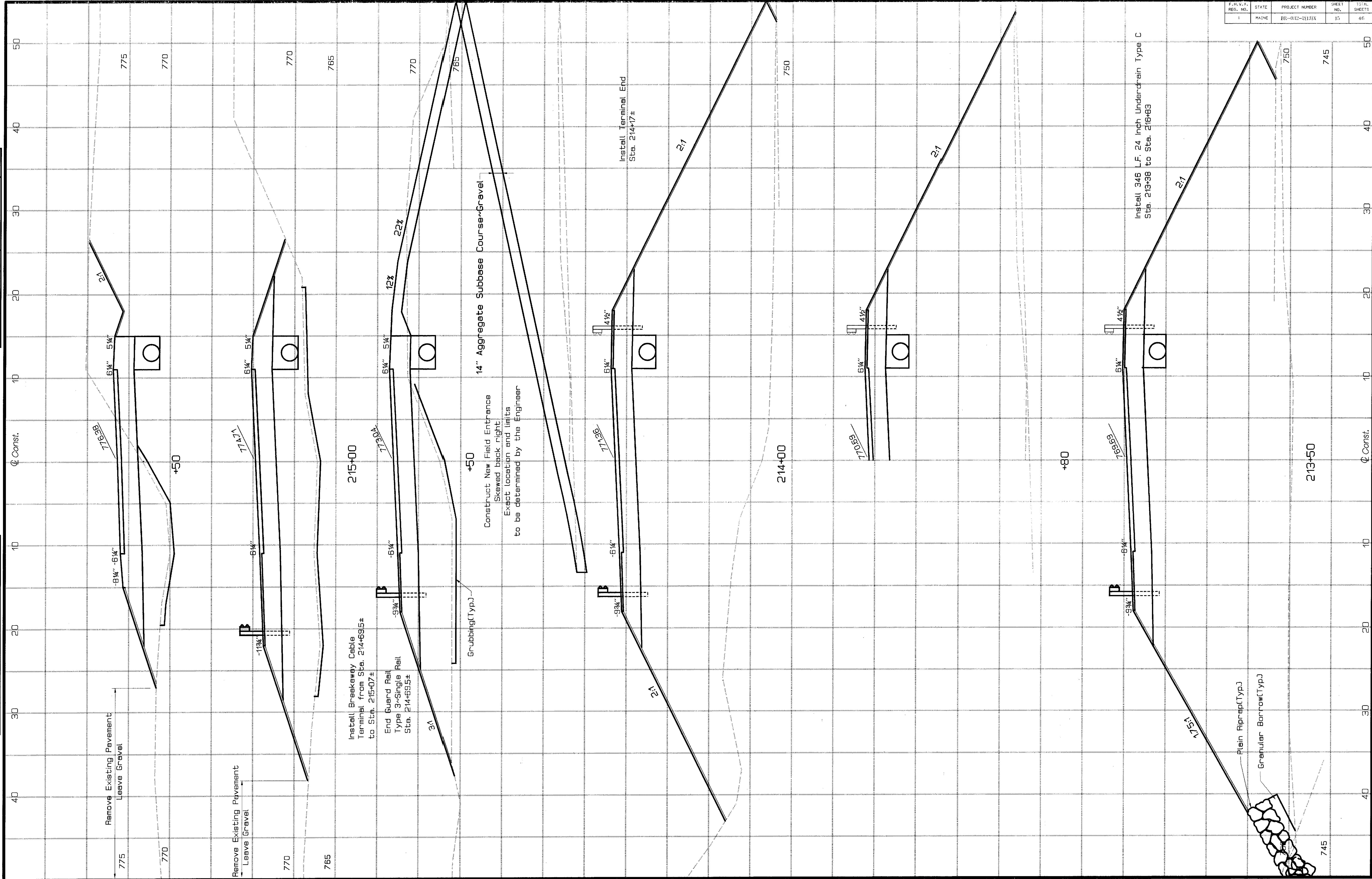


F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-032-2(13)X	14	46

16APR97-150620

ORIGINAL	SURVED	BY	DATE
SURVEY	PLOTTED	BY	DATE
NOTE BOOK	TEMPERATURE	BY	DATE
NO.	NO.	BY	DATE

FINAL	SURVED	BY	DATE
SURVEY	PLOTTED	BY	DATE
NOTE BOOK	TEMPERATURE	BY	DATE
NO.	NO.	BY	DATE



F.H.V.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-012-2(13)X	35	46